

GROSJEAN et al
Appl. No. 10/579,227
February 19, 2008

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AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

- 1 (currently amended). Polymer of ethylene which has:
a μ_0/μ_2 ratio of at least ~~13~~ 13 to 20; and
a high load melt index HLMI lower than 8 g/10 min, and
a value of $\tan \delta$ at $\omega/\omega_c = 0.01$ of less than 1.3, where δ is G''/G' , ω is the frequency at which G'' and G' are measured and ω_c is the frequency at which $G'' = G'$, and G' and G'' are respectively the elastic modulus and viscous modulus, both measured in Pa at 190°C.
- 2 (original). Polymer according to claim 1, which has a μ_0/μ_2 ratio of at least 14.
- 3 (previously presented). Polymer according to claim 1, having a density D (measured according to ASTM D 792 standard) of between 930 and 955 kg/m³.
- 4 (currently amended). Polymer according to claim 1, having a Pent test value (determined in accordance with ASTM F 1473-94 standard) higher than 150 hours.
- 5 (previously presented). Polymer according to claim 1, having a polydispersity index greater than 50.

GROSJEAN et al
Appl. No. 10/579,227
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6 (currently amended). Process for the preparation of a polymer of ethylene which has a μ_1/μ_2 ratio of ~~at least 13~~ 13 to 20 and a high load melt index HLMI lower than 8 g/10 min, ~~wherein comprising contacting~~ ethylene, and optionally at least one higher alpha-olefin, ~~are contacted~~ with a catalyst comprising chromium supported on a silica-titania support.

7 (original). Process according to claim 6, which is conducted in the absence of a cocatalyst.

8 (currently amended). Process according to claim 6, wherein the polymer is as defined above has a value of $\tan \delta$ at $\omega/\omega_c = 0.01$ of less than 1.3, where δ is G''/G' , ω is the frequency at which G'' and G' are measured and ω_c is the frequency at which $G'' = G'$, and G' and G'' are respectively the elastic modulus and viscous modulus, both measured in Pa at 190°C.

9 (previously presented). Process according to claim 6, wherein the catalyst contains between 0.8 and 1.5 weight % of chromium and between 1.9 and 3.1 weight % of titanium on the support, based on the weight of the support; and the support has a specific surface area SA (measured in accordance with British Standard BS 4359/1) of between 450 and 550 m²/g, a pore volume PV (measured by BET N₂ analysis using desorption isotherm and considering only radii of pores equal to at least 300 Angstroms)

GROSJEAN et al
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of between 1.8 and 2.7 ml/g, and an average pore diameter between 120 and 200 Angstroms.

10 (currently amended). Pipe comprising a polymer of ethylene as defined in claim 1.

11 (currently amended). ~~Use, Process for the manufacture of pipes by~~
~~extrusion, of a pipe, comprising extruding a polymer of ethylene as defined in claim 1.~~